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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/494,211	01/25/2000	Il-Ki Woo	003364.P035	3154

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Blakely Sokoloff Taylor & Zafman LLP  
12400 Wilshire Boulevard  
7th Floor  
Los Angeles, CA 90025

EXAMINER

DOVE, TRACY MAE

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 01/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

MF-7

# Office Action Summary

Application No.  
09/494,211

Applicant(s)  
Woo

Examiner  
Tracy Dove

Art Unit  
1745



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Oct 1, 2001
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some\* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- |  |  |
|--|--|
| 15) <input type="checkbox"/> Notice of References Cited (PTO-892)                              | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 16) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)          | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ | 20) <input type="checkbox"/> Other: _____                                    |

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### **DETAILED ACTION**

This Office Action is in response to the communication filed on 10/1/01 (supplemental response filed 10/3/01). Applicant's arguments have been considered, but are not persuasive. Claims 1-3 remain rejected in view of the prior art of record. Claims 1-3 are further rejected under 35 U.S.C. 112, first paragraph. This Action is made **FINAL**, as necessitated by amendment.

#### ***Specification***

The objection to the specification has been withdrawn.

#### ***Claim Objections***

The objections to the claims have been withdrawn.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-3 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for specific alloy combinations recited in Table 1 of the instant specification (page 5), does not reasonably provide enablement for all of the specific alloy combinations of the

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presently claimed invention. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims. The specification does not teach all of the specific alloy combinations of the instant claims.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 recites the limitations "the amount of zinc", "the amount of iron" and "the amount of aluminum". There is insufficient antecedent basis for these limitations in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Idota et al.,  
US 6,235,427 B1.

See Office Action of 6/13/01 for the reasons for rejection.

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***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami et al., US 5,702,845 in view of Idota et al., US 6,235,427 B1.

See Office Action of 6/13/01 for the reasons for rejection.

***Response to Arguments***

Applicant's arguments filed 10/1/01 have been fully considered but they are not persuasive.

**Idota et al.**

Applicant argues Idota discloses a foil used as a current collector wherein the material of a current collector preferably has a purity of 98% or higher. Applicants submit that a disclosure calling for a purity of 98% or higher may disclose therein an alloy constituent comprising up to, but not exceeding, 2%. Therefore, Applicant concludes that an alloy comprising up to 4% nickel, 4% titanium, or up to 5% boron, at least is not anticipated by a foil having a purity of 98%. Further argued, the absence of alloy constituents exceeding 2% in the Idota reference is fatal to the asserted rejection of anticipation.

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Examiner would like to point out that claim 2 was not rejected under 35 U.S.C. 102(e) as being anticipated by Idota. Neither claim 1 nor claim 3 contain any limitations regarding percentage of elements contained in the alloy. Also the section pointed out by Applicant in col. 11, lines 59-61 of Idota is a preferred embodiment. The disclosure of Idota is not limited to any specific embodiment. Idota teaches suitable materials for a current collector for the negative electrode include copper, stainless steel (alloy steels containing high percentages of chromium), nickel, titanium and alloys thereof. See col. 11, lines 52-54. Additionally, claim 2 recites an alloy containing 0.8-4% nickel, 0.2-4% titanium and 0.0005-5% boron. Therefore, even if the alloy of Idota is 98% copper, the reference still renders obvious the claimed invention.

Kawakami et al. in view of Idota et al.

Applicant argues "none of" the materials or alloys cited in Kawakami include the elements claimed in claims 1 and 3 and Kawakami "neither teaches nor suggests a method which includes the addition of these alloy constituents of claims 1 and 3 to the makeup of the current collector". Furthermore, "Applicants note that copper-based alloy foil include nickel and titanium disclosed in cited references, does not achieve the mechanical strength of the foil disclosed" in the instant specification (Table 1).

Examiner points out that Kawakami teaches a negative current collector may be made from nickel, titanium, copper, aluminum, stainless-steel (alloy steels containing high percentages of chromium), platinum, palladium, gold, zinc, various alloys or a complex metal comprising at least two kinds of the above materials. See col. 8, lines 41-46 and col. 9, lines 3-4.

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Table 1 includes data for only specific alloys for the negative current collector. Thus, Applicant's attempt to show unexpected results is not convincing.

Applicant argues Idota does not cure the defect in Kawakami because Idota teaches a current collector wherein the material of the current collector preferably has a purity of 98% or higher. The disclosure of Idota is not limited to any specific embodiment. Idota teaches suitable materials for a current collector for the negative electrode include copper, stainless steel, nickel, titanium and alloys thereof. See col. 11, lines 52-54. Additionally, claim 2 recites an alloy containing 0.8-4% nickel, 0.2-4% titanium and 0.0005-5% boron. Therefore, even if the alloy of Idota is 98% copper, the reference still renders obvious the claimed invention.

Since Idota teaches the current collector has a purity of 98% or higher, one of skill would know that any element added to the copper alloy would be added in a minor amount (2% or less). For example if the current collector of Idota is mainly composed of copper (copper-based material of claims 1 and 3 is copper) and the copper is alloyed with a minor amount of stainless steel (at least one material of claims 1 and 3) the instant invention is obvious in view of the prior art of record.

### *Conclusion*


Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tracy Dove whose telephone number is (703) 308-8821. The Examiner may normally be reached Monday, Wednesday and Thursday. My supervisor is Gabrielle Brouillette, who can be reached at (703) 308-0756. The Art Unit receptionist can be reached at (703) 308-0661 and the official fax number is (703) 305-3599.

December 18, 2001

  
CAROL CHANEY  
PRIMARY EXAMINER